

What is Claimed Is:

1. An apparatus for sampling one or more analytes of a liquid sample, comprising:
 - (a) one or more pre-concentration chromatographic columns that are capable of retaining said one or more analytes;
 - (b) a solvent delivery system in fluid communication with said one or more pre-concentration chromatographic columns, wherein said solvent delivery system is capable of delivering a solvent that is capable of eluting said one or more analytes from said one or more pre-concentration chromatographic columns;
 - (c) one or more analytical chromatographic columns in fluid communication with said one or more pre-concentration chromatographic columns, wherein said one or more analytical columns is capable of separating said one or more analytes;
 - (d) a variable wavelength detector in fluid communication with said one or more analytical columns; and
 - (e) an electrochemical detector in fluid communication with said variable wavelength detector.
2. The apparatus of claim 1, wherein said variable wavelength detector and said electrochemical detector are connected in line.
3. The apparatus of claim 1, wherein said one or more analytes is selected from the group consisting of nitroso compounds, organic nitro compounds, organothiophosphates, PAHs and drug metabolites.
4. The apparatus of claim 1, wherein said one or more analytical chromatographic columns is a high-performance liquid chromatography column.

5. The apparatus of claim 1, further comprising a sample loop in fluid communication with said one or more pre-concentration chromatographic columns.
6. The apparatus of claim 5, wherein said sample loop is a 2 ml sample loop.
7. The apparatus of claim 1, wherein said one or more pre-concentration chromatographic columns are C18, 5 μ m particle size columns.
8. The apparatus of claim 1, wherein said one or more analytical chromatographic columns are C18 reversed phase, 5 μ m particle size columns.
9. The apparatus of claim 1, wherein said electrochemical detector is a photo-assisted electrochemical detector.
10. An apparatus for sampling one or more explosive residues of a liquid sample, comprising:
 - (a) one or more pre-concentration chromatographic columns, wherein said one or more pre-concentration chromatographic columns are capable of retaining said one or more explosive residues, but not capable of retaining salts or other contaminants;
 - (b) a solvent delivery system in fluid communication with said one or more pre-concentration chromatographic columns, wherein said solvent delivery system is capable of delivering a solvent that is capable of eluting said one or more explosive residues from said one or more pre-concentration chromatographic columns;
 - (c) one or more high-performance liquid chromatography columns in fluid communication with said one or more pre-concentration chromatographic columns, wherein said one or

more high-performance liquid chromatography columns are capable of separating said one or more explosive residues;

- (d) a variable wavelength detector in fluid communication with said one or more high-performance liquid chromatography columns; and
- (e) a photo-assisted electrochemical detector in fluid communication with said variable wavelength detector,

wherein said variable wavelength detector and said photo-assisted electrochemical detector are connected in line.

11. The apparatus of claim 10, further comprising a sample loop in fluid communication with said one or more pre-concentration chromatographic columns.
12. The apparatus of claim 11, wherein said sample loop is a 2 ml sample loop.
13. The apparatus of claim 10, wherein said one or more pre-concentration chromatographic columns are C18, 5 μ m particle size columns.
14. The apparatus of claim 10, wherein said one or more analytical chromatographic columns are C18 reversed phase, 5 μ m particle size columns.
15. A method for sampling one or more analytes of a liquid sample, comprising:
 - (a) passing the liquid sample through one or more pre-concentration chromatographic columns, thereby retaining said one or more analytes on the one or more pre-concentration chromatographic columns and concentrating said one or more analytes;
 - (b) delivering a solvent to the one or more pre-concentration chromatographic columns, thereby eluting said one or more

- analytes from the one or more pre-concentration chromatographic columns to give an eluate;
- (c) passing the eluate through one or more analytical chromatographic columns, thereby separating said one or more analytes; and
 - (d) analyzing the separated one or more analytes in a variable wavelength detector and then in an electrochemical detector.
16. The method of claim 15, wherein said one or more analytes is selected from the group consisting of nitroso compounds, organic nitro compounds, organothiophosphates, PAHs and drug metabolites.
 17. The method of claim 15, further comprising holding the liquid sample in a sample loop prior to (a).
 18. The method of claim 17, further comprising drawing the liquid sample from a liquid reservoir into the sample loop.
 19. The method of claim 18, wherein said method is used to sample ground water.
 20. The method of claim 15, wherein said method is used to sample a liquid sample on-site.
 21. A method for on-site sampling of one or more explosive residues of a liquid sample, comprising:
 - (a) drawing the liquid sample from an on-site liquid reservoir into a sample loop and holding the liquid sample in the sample loop;
 - (b) passing the liquid sample from the sample loop through one or more pre-concentration chromatographic columns, thereby retaining said one or more explosive residues on the one or more pre-concentration chromatographic columns and concentrating said one or more explosive residues;

- (c) delivering a solvent to the one or more pre-concentration chromatographic columns, thereby eluting said one or more explosive residues from the one or more pre-concentration chromatographic columns to give an eluate;
 - (d) passing the eluate through one or more high-performance liquid chromatography columns, thereby separating the one or more explosive residues on the one or more high-performance liquid chromatography columns; and
 - (e) analyzing the separated one or more explosive residues in a variable wavelength detector and then in a photo-assisted electrochemical detector.
22. The method of claim 21, wherein said sample is ground water.